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Abstract of the Disclosure

An optical system for simultaneously compensating a source drift of a light source and a detector drift of a light detector includes a test location, a first beam path from the light source to the test location, a second beam path from the test location to the light detector. First and second beam paths are arranged to intersect at a beam crossing. A calibration sample having a known reflectivity is positioned at the test location and illuminated by a probe beam generated by the light source. A known response beam of the calibration sample is used for calibrating the light source and the detector. A reference sample is placed at the beam crossing and illuminated by the probe beam. In response, the reference sample sends a reference beam along the second path length, which is used for compensating the source and detector drift.

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